REMARKS

The above amendments and these remarks are responsive to the Office action dated February 4, 2005. In the Office action, the drawings are objected to for failing to show every feature of the claimed invention, claims 1, 16, 17, 20 and 21 are rejected under 35 U.S.C. 102(b) based on U.S. Pat. No. 5,199,395 to Mizumura et al., claims 1 and 11 are rejected under 35 U.S.C. 102(b) under U.S. Pat. No. 5,477,817 to Hufendiek et al., claims 1, 2 and 9-13 are rejected under 37 U.S.C. 102(b) based on U.S. Pat. No. 2,691,972 to Stump et al., claims 3-6 are rejected under 35 U.S.C. 103(a) based on Stump et al. in view of Hufendiek et al., claims 7 and 8 are rejected under 35 U.S.C. 103(a) based on Stump et al. in view of Hufendiek et al. and further in view of U.S. Pat. No. 3,830,289 to Olson, claims 19 and 22 are rejected under 35 U.S.C. 103(a) based on Mizumura et al. in view of U.S. Pat. No. 6,712,652 to Roycroft, and claim 18 is rejected under 35 U.S.C. 103(a) based on Mizumura et al. in view of U.S. Pat. No. 6,530,425 to Wehrmann et al. Applicants thank the Examiner for the careful consideration of the application. Applicants traverse the rejections, but nevertheless amend the claims as shown above. In view of the amendments above, and the remarks below, applicants respectfully request reconsideration of the application under 37 C.F.R. § 1.111 and allowance of the pending claims.

Drawings

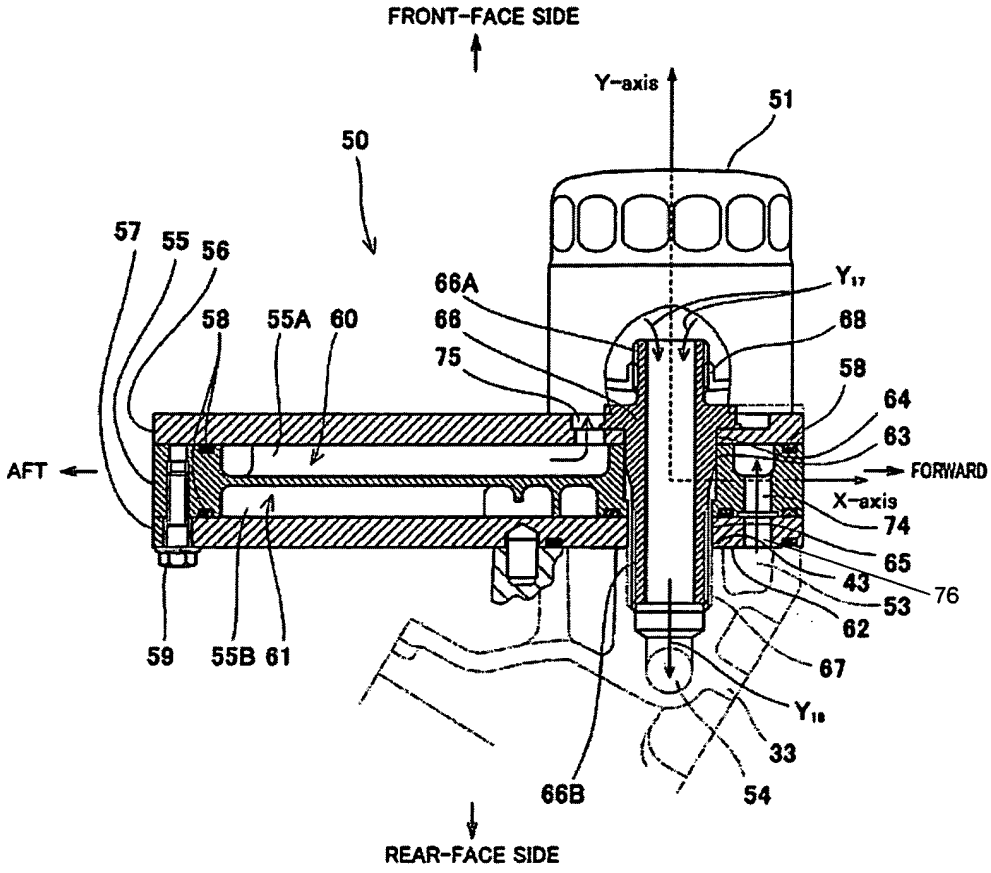
Claim 16, the language of which appears to have prompted the objection to the drawings, has been cancelled without prejudice. Therefore, the objection is believed to be moot.

Claims 1-3

Claims 1-3 have been cancelled, without prejudice.

Claims 4-8

Claim 4 has been amended to recite "a first cooling portion including a passage forming plate provided with grooves respectively formed on one face thereof and an opposite face thereof, a first cover member and a second cover member stacked on the passage forming plate and configured to respectively cover the grooves, an oil passage formed by covering the groove formed on the one face of the passage forming plate with the first cover member, and a coolant passage formed by covering the groove formed on the opposite face of the passage forming plate with the second cover member; a mounting bolt by which the first cooling portion is removably mountable on an outer wall face of the engine; and an oil filter mounted on an outer wall face of the first cover member; wherein the first cover member is provided with a first oil hole through which the oil passage of the first cooling portion and the oil filter communicate with each other, and the second cover member is provided with a second oil hole through which the oil passage of the first cooling portion and an oil passage formed within the engine communicate with each other." One example of such configuration is shown in Fig. 5, reproduced below. One potential advantage of such a configuration is that an oil cooler may be made that is small, lightweight and has a higher cooling efficiency.



Subject Application - Fig. 5

Hufendiek et al. fails to disclose a first cooling portion including a passage forming plate provided with grooves respectively formed on one face thereof and an opposite face thereof, a first cover member covering the groove formed on the one face to form an oil passage, and a second cover member covering the groove formed on the opposite face thereof to form a coolant passage. One potential advantage of these features as recited in amended claim 4 is that an oil cooler which is smaller, lightweight, and of high cooling efficiency may be produced.

Hufendiek et al. further fails to disclose an oil filter mounted on a first cover member, as claimed. Stump et al. fails to disclose any oil filter at all. One potential advantage of such an oil cooler as claimed in amended claim 4 is that it may be made to include both a cooling portion

and an oil filter in a manner that is small and lightweight (for illustrative embodiments see Fig. 5 above).

In addition, both Stump et al. and Hufendiek et al. fail to disclose a first oil hole formed on the first cover member, through which the oil passage of the first cooling portion and the oil filter communicate with each other, and a second oil hole formed on the second cover member, through which the oil passage of the first cooling portion and the oil passage formed inside the engine communicate with each other. One potential advantage of an oil cooler as claimed in amended claim 4 with such first and second oil holes (examples of which are shown at 75 and 76 in Fig. 5), is that an engine with an oil cooler may be configured to be small and compact.

In view of these differences, Applicants respectfully submit that neither Stump et al. nor Hufendiek et al., alone or in combination, discloses or suggests each and every claimed feature of amended claim 4.

With regard to claims 5-6, these claims have been amended to recite additional features of the oil receiving portion. Exemplary embodiments illustrating these claimed features are shown in Figs. 9 and 10. These features of claims 5 and 6, each in combination with the elements of claim 4, are not disclosed in the combination of Stump et al. and Hufendiek et al., nor any other prior art of record.

With regard to claim 7, this claim has been amended to recite that the first cooling portion and the second cooling portion are used together to cool the oil. This feature in combination with the elements of claim 4 is not disclosed by the combination of Stump et al. Hufendiek et al., and Olson, nor any other prior art of record.

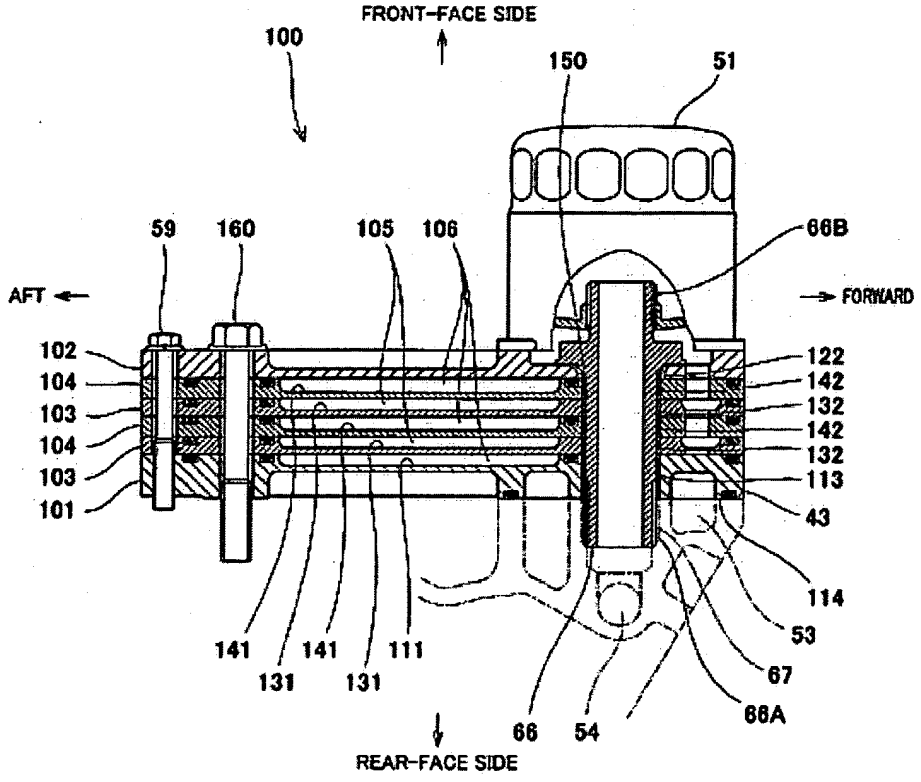
With regard to claim 8, this claim has been amended to recite structural features of the mounting bolt to clarify the connecting structure between the mounting bolt and the oil filter, and

the mounting structure by which the adapter is mounted to the mounting bolt. These features in combination with the elements of claim 4 are not disclosed by the combination of Stump et al. Hufendiek et al., and Olson, nor any other prior art of record.

In view of the above, amended claim 4, as well as dependent claims 5-8, are believed allowable.

Claim 9

Claim 9 has been rewritten in independent form to include features recited in original claims 1 and 10. Further, claim 9 has been amended to recite that a plurality of oil passages and a plurality of coolant passages are disposed alternately in a layered structure. One example of such a configuration is shown in Fig. 12, which depicts oil passages 105 and coolant passages 106 as shown below.



Subject Application - Fig. 12

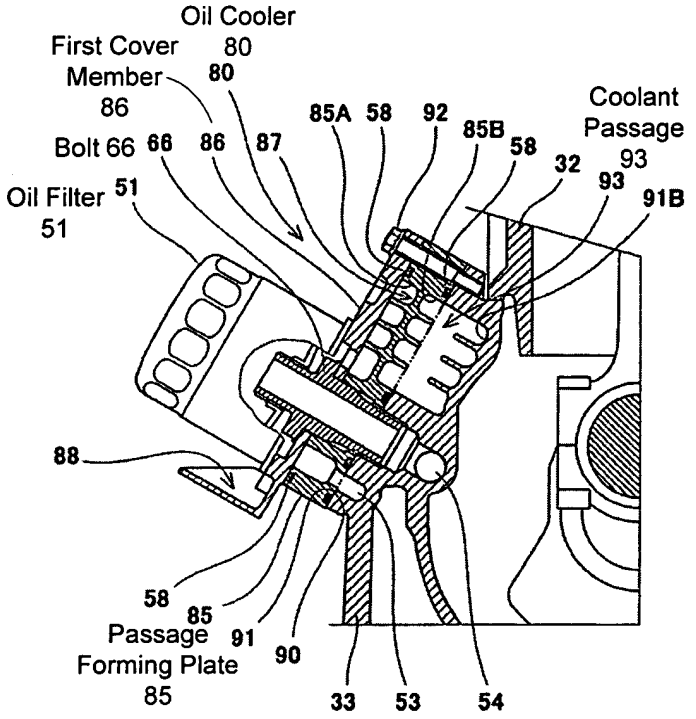
In contrast, Stump et al. fails to disclose an oil cooler with a layered structure as claimed. Therefore, applicants respectfully submit that claim 9 is allowable.

Claims 10-13

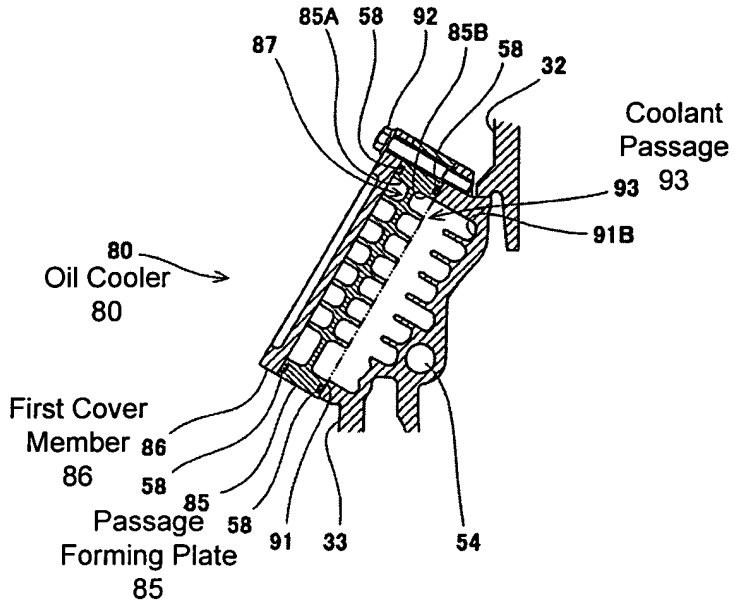
Claims 10-13 have been cancelled, without prejudice.

Claims 14-15

Claim 14 has been rewritten in independent form and amended to include certain features recited in amended claim 4, to recite that the oil cooler comprises a first cooling portion including a passage forming plate and first cover member, a mounting bolt, and an oil filter. Claim 14 further has been amended to recite that the first cover member includes a first oil hole through which the first cooling portion and the oil filter communicate with each other. Claim 14 further has been amended to recite that the first cooling portion includes a coolant passage formed between the opposite face of the passage forming plate and the outer wall face of the engine which is connected with the opposite face. One example of such a configuration is shown in Figs. 10 and 11, reproduced below. In the depicted embodiment, oil cooler 80 comprises a first cooling portion including a passage forming plate 85 and first cover member 86, a mounting bolt 66, and an oil filter 51. The first cooling portion further includes a coolant passage 93 as claimed.



Subject Application - Fig. 10



Subject Application - Fig. 11

The Office action appears not to identify a ground of rejection for claim 14 or claim 15. Nevertheless, applicant believes that none of the prior art of record, including Stump et al., Hufendiek et al., Olson, and Mizumura et al., either alone or in combination, discloses the combination of features of amended claim 14. With regard to claim 15, this claim has been amended to recite that the first cooling portion and the second cooling portion are used together to cool the oil. Applicants further submit that none of the prior art of record discloses such a construction. For these reasons, applicant respectfully submits that claims 14 and 15 are allowable.

Claims 16-19

Claims 16-19 have been cancelled, without prejudice.

Claims 20-22

Amended claim 20 is rewritten in independent form and amended to recite an oil passage and coolant passage in a similar manner to original claim 12, and to recite that the coolant passage of the oil cooler and the oil gallery of the engine extend along the outer wall face of the crankcase. One exemplary embodiment illustrating such a configuration is shown in Figs. 10 and 11, reproduced above. Such a construction is not disclosed in Mizumura et al. In particular, Mizumura et al. fails to disclose the oil gallery formed on the outer wall portion of the crankcase to extend along the outer wall face of the crankcase. Therefore, applicants respectfully submit that claim 20, as well as dependent claims 21 and 22, are allowable.

Claim 23

New claim 23 has been added to recite the features of original claim 3, and depends from amended claim 20.

Claim 24

New claim 24 has been added to recite structural features of the mounting bolt, and depends from amended claim 4.

Claim 25

New claim 25 has been added to include features recited in original claim 3, and depends from amended claim 4.

Claim 26

New claim 26 has been added to recite certain features of original claim 12, and depends from amended claim 9.

Claim 27

New claim 27 has been added to recite that the oil cooler comprises the first cooling portion, the mounting bolt, and the oil filter, and the first cover member has a first oil hole through which the first cooling portion and the oil filter communicate with each other. Claim 27 depends from amended claim 9.

Claim 28

New claim 28 has been added to recite the features recited in original claim 15, and depends from added claim 27.

Claim 29

New claim 29 has been added to recite certain features recited in original claim 13 and depends from amended claim 14.

Applicants believe that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or

if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

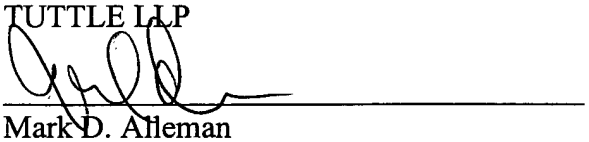
CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, to: Mail Stop AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on July 5, 2005.

Josi Bridges

Respectfully submitted,

ALLEMAN HALL MCCOY RUSSELL & TUTTLE LLP



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